

## **SATELLITE-DERIVED DISTRIBUTIONS, INVENTORIES AND FLUXES OF DISSOLVED AND PARTICULATE ORGANIC MATTER ALONG THE NORTHEASTERN U.S. CONTINENTAL MARGIN**

Estuaries and the coastal ocean experience a high degree of variability in the composition and concentration of particulate and dissolved organic matter (DOM) as a consequence of riverine and estuarine fluxes of terrigenous DOM, sediments, detritus and nutrients into coastal waters and associated phytoplankton blooms. Our approach integrates biogeochemical measurements, optical properties and remote sensing to examine the distributions and inventories of organic carbon in the U.S. Middle Atlantic Bight and Gulf of Maine. Algorithms developed to retrieve colored DOM (CDOM), Dissolved (DOC) and Particulate Organic Carbon (POC) from NASA's MODIS-Aqua and SeaWiFS satellite sensors are applied to quantify the distributions and inventories of DOC and POC. Horizontal fluxes of DOC and POC from the continental margin to the open ocean are estimated from SeaWiFS and MODIS-Aqua distributions of DOC and POC and horizontal divergence fluxes obtained from the Northeastern North Atlantic ROMS model. SeaWiFS and MODIS imagery reveal the importance of estuarine outflow to the export of CDOM and DOC to the coastal ocean and a net community production of DOC on the shelf.

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